

Telemedicine Nomenclature

Analog: A continuous signal where the time varying variable is represented by another time varying quantity. It differs from a digital signal where a continuous quantity is represented by a discrete function that only takes on one of a finite number of values. (ATA)

Application Service Provider (ASP): An ASP hosts a variety of applications on a central server. For a fee, customers can access the applications over secure Internet connections or a private network. This means that they do not need to purchase, install or maintain the software themselves; instead they rent the applications they need from the ASP. New releases, such as software upgrades, are generally included in the price. (ATA)

Asynchronous: Term describing store and forward transmission of medical images and/or data because the data transfer takes place over a period of time, and typically in separate time frames. The transmission typically does not take place simultaneously. This is the opposite of synchronous. (ATA)

Asynchronous Transfer Mode (ATM): A telecommunications standard to support voice, video and data communications. The mode uses asynchronous time-division multiplexing and encodes data into small, fixed-sized cells rather than packets or frames. (ATA)

Authentication: A method of verifying the identity of a person sending or receiving information using passwords, keys and other automated identifiers. (ATA)

Bandwidth: A measure of the information carrying capacity of a communications channel; a practical limit to the size, cost, and capability of a telemedicine service. (ATA)

Biometrics:

Broadband: Communications (e.g., broadcast television, microwave, and satellite) capable of carrying a wide range of frequencies; refers to transmission of signals in a frequency-modulated fashion over a segment of the total bandwidth available, thereby permitting simultaneous transmission of several messages. (ATA)

Compressed video: Video images that have been encoded using fewer bits of information than the original dataset (either lossless or lossy) to reduce the amount of bandwidth needed to capture the necessary information so that the information can be sent over a network. (ATA)

Computer-based Patient Record (CPR): An electronic form of individual patient information designed to provide access to complete and accurate patient data. (ATA)

Diagnostic Equipment (Scopes, Cameras and Other Peripheral Devices): A piece of hardware or device not part of the central computer (e.g., digitizers, stethoscope, or camera) that can provide medical data input to or accept output from the computer. (ATA)

Digital: Data technology using discrete values as opposed to continuous or analog signals. (ATA)

Digital Camera (still images): A camera that stores images digitally rather than recording them on film allowing data to be downloaded to a computer system, manipulated with a graphics program and printed or transmitted electronically. It is typically used to take still images of a patient for dermatology, ophthalmology, and wound care. (ATA)

Digital Imaging and Communication in Medicine (DICOM): The international standard for medical images and

related information (ISO 12052). DICOM consists of a set of protocols describing how images are identified, formatted, transmitted and displayed that is vendor-independent. It was developed by the American College of Radiology and the National Electronic Manufacturers Association (<http://medical.nema.org/>).

Digital Signature: Mathematical scheme for authenticating digital messages or documents. Valid signatures give the recipient evidence that the message was created by a known sender and not altered in transit. (ATA)

Disease Management: A continuous coordinated health care process that seeks to manage and improve the health status of a carefully defined patient population over the entire course of a disease (e.g., Congestive Heart Failure, Diabetes Mellitus) The patient populations targeted are high-risk, high-cost patients with chronic conditions that depend on appropriate care for proper maintenance. (ATA)

Distance Learning: The incorporation of video and audio technologies, allowing students to "attend" classes and training sessions that are being presented at a remote location. Distance learning systems are usually interactive and are a tool in the delivery of training and education to widely dispersed students, or in instances in which the instructor cannot travel to the student's site. (ATA)

Distant Site: Site at which the physician or other licensed practitioner delivering the service is located at the time the service is provided via telecommunications system. (<http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Telemedicine.html>) Other common names for this term include hub site, specialty site, provider/physician site and referral site. The site may also be referred to as the consulting site. (ATA)

e-Pharmacy: The use of electronic information and communication technology to provide and support comprehensive pharmacy services when distance separates the participants. (ATA)

eHealth: Healthcare practice supported by electronic processes and communication. (ATA)

Electronic Data Interchange (EDI): The sending and receiving of data directly between trading partners without paper or human intervention. (ATA)

Electronic Health Record (EHR): A systematic collection of electronic health information about individual patients or populations that is recorded in digital format and capable of being shared across health care settings via network-connected enterprise-wide information systems and other information networks or exchanges. EHRs generally include patient demographics, medical history, medication, allergies, immunization status, laboratory test results, radiology and other medical images, vital signs, characteristics such as age and weight, and billing information. (ATA)

Electronic Medical Record (EMR): A computerized medical record generated in an organization that delivers health care, such as a hospital or physician's office. EMRs are often part of a local stand-alone health information system that allow storage, retrieval and modification of records. (ATA)

Electronic Patient Record (EPR): An electronic form of individual patient information that is designed to provide access to complete and accurate patient data, alerts, reminders, clinical decision support systems, links to medical knowledge, and other aids. (ATA)

Encryption: A system of encoding electronic data where the information can only be retrieved and decoded by the person or computer system authorized to access it. (ATA)

e-Prescribing: The electronic generation, transmission and filling of a medical prescription, as opposed to traditional paper and faxed prescriptions. E-prescribing allows for qualified healthcare personnel to transmit a new

prescription or renewal authorization to a community or mail-order pharmacy. (ATA)

Firewall: Computer hardware and software that block unauthorized communications between an institution's computer network and external networks. (ATA)

Full-motion Video: A standard video signal that allows video to be shown at the distant end in smooth, uninterrupted images. (ATA)

Guideline: A statement of policy or procedures to determine a course of action, or give guidance for setting standards (<http://jtt.rsmjournals.com/content/8/2/63.abstract>).

Health Information Exchange (HIE): the mobilization of healthcare information electronically across organizations within a region, community or hospital system. (Wikipedia)

Health Level-7 Data Communications Protocol (HL-7): Communication standard that guides the transmission of health-related information. HL7 allows the integration of various applications, such as bedside terminals, radiological imaging stations, hospital census, order entries, and patient accounting, into one system. (ATA)

High-Def (HD): A video of higher resolution than what is standard. There is no specific definition or criterion for HD but video images with more than 480 horizontal lines (North America) or 570 lines (Europe) is HD. 720 scan lines is generally the minimum. Standard resolution images acquired at rates faster than normal (60 fps North America, 50 fps Europe) by a high-speed camera are often regarded as high-definition as are non-interlaced or progressive scan video. (ATA)

HIPAA: Acronym for Health Information Portability and Accountability Act. The HIPAA Privacy Rule protects the privacy of individually identifiable health information, the HIPAA Security Rule sets national standards for the security of electronic protected health information, and the confidentiality provisions of the Patient Safety Rule protect identifiable information being used to analyze patient safety events and improve patient safety. (<http://www.hhs.gov/ocr/privacy/index.html>)

Home Health Care and Remote Monitoring Systems: Care provided to individuals and families in their place of residence for promoting, maintaining, or restoring health or for minimizing the effects of disability and illness, including terminal illness. In the Medicare Current Beneficiary Survey and Medicare claims and enrollment data, home health care refers to home visits by professionals including nurses, physicians, social workers, therapists, and home health aides. Use of remote monitoring and interactive devices allows the patient to send in vital signs on a regular basis to a provider without the need for travel. (ATA)

Hub Site: Location from which specialty or consultative services originate. (ATA)

Informatics: The use of computer science and information technologies for the management and processing of data, information and knowledge. The field encompasses human-computer interaction, information science, information technology, algorithms, areas of mathematics, and social sciences. (ATA)

Interactive Video/Television: Video conferencing technologies that allow for two-way, synchronous, interactive video and audio signals for the purpose of delivering telehealth, telemedicine or distant education services. It is often referred to by the acronyms ITV, IATV or VTC (video teleconference). (ATA)

Interoperability: The ability of two or more systems (computers, communication devices, networks, software, and other information technology components) to interact with one another and exchange data according to a prescribed method in order to achieve predictable results (ISO ITC-215). There are three types of interoperability:

human/operational, clinical, and technical. (ATA)

JCAHO: Acronym for Joint Commission on Accreditation of Healthcare Organizations, an independent, not-for-profit organization that accredits and certifies health care organizations and programs in the United States. Joint Commission accreditation and certification is recognized nationwide as a symbol of quality that reflects an organization's commitment to meeting certain performance standards. (<http://www.jointcommission.org/>)

Latency: The perceptible delay between transmission and receipt of data across a connection, generally due to high network activity or a poor/slow connection. (ATA)

Licensure: a restricted practice requiring a license, which gives a "permission to practice." Such licenses are usually issued in order to regulate some activity that is deemed to be dangerous or a threat to the person or the public or which involves a high level of specialized skill. (Wikipedia)

m-Health: Practice of medicine and public health supported by mobile communication devices, such as mobile phones, tablet computers and PDAs for health services and information. (ATA)

Meaningful use: the set of standards defined by the Centers for Medicare & Medicaid Services (CMS) Incentive Programs that governs the use of electronic health records and allows eligible providers and hospitals to earn incentive payments by meeting specific criteria. (healthit.gov)

Medical Codes: A process of describing medical diagnoses and procedures using specific universal medical code numbers. States may select from a variety of HCPCS codes (T1014 and Q3014), CPT codes and modifiers (GT, U1-UD) in order to identify, track and reimburse for telemedicine services. (<http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Telemedicine.html>)

Medical/ Nursing Call Center: A centralized office that answers incoming telephone calls from patients, but may also respond to letters, faxes, e-mails and similar written correspondence. Usually staffed by nurses, call centers provide basic health information and instructions to callers but do not provide an official diagnosis of conditions or prescribe medicine. Call centers act as an initial triage point for patients. (ATA)

Originating Site: Location of the Medicaid patient at the time the service being furnished via a telecommunications system occurs. Telepresenters may be needed to facilitate the delivery of this service. (<http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Delivery-Systems/Telemedicine.html>). Other common names for this term include spoke site, patient site, remote site, and rural site. (ATA)

Patient Exam Camera (video): Digital or analog camera used to examine patients during a real-time teleconsult or acquire images for a store-forward teleconsult. Types of cameras include those embedded with set-top videoconferencing units, handheld video cameras, gooseneck cameras, camcorders, etc. (ATA)

Personal Health Record (PHR): Health record maintained by the patient to provide a complete and accurate summary of an individual's medical history accessible online. (ATA)

Picture Archiving and Communications System (PACS): Combination of hardware and software dedicated to short and long term storage, retrieval, management, distribution and presentation of digital medical images. (ATA)

Presenter (Patient Presenter): An individual with a clinical background (e.g., LPN, RN, etc) trained in the use of telehealth equipment who must be available at the originating site to "present" the patient, manage the cameras and perform any "hands-on" activities to complete the tele-exam successfully. In certain cases, a licensed practitioner such as an RN or LPN might not be necessary, and a non-licensed provider such as support staff, could provide

tele-presenting functions. Requirements (legal) for presenter qualifications differ by location and should be followed. (ATA)

Protected Health Information (PHI): Part of the HIPAA Privacy Rule that protects all "individually identifiable health information" held or transmitted by a covered entity or its business associate, in any form or media, whether electronic, paper, or oral. The Privacy Rule calls this information "protected health information (PHI)." Individually identifiable health information" is information, including demographic data, that relates to the individual's past, present or future physical or mental health or condition, the provision of health care to the individual, or the past, present, or future payment for the provision of health care to the individual, and that identifies the individual or for which there is a reasonable basis to believe it can be used to identify the individual. Individually identifiable health information includes many common identifiers (e.g., name, address, birth date, Social Security Number). The Privacy Rule excludes from protected health information employment records that a covered entity maintains in its capacity as an employer and education and certain other records subject to, or defined in, the [Family Educational Rights and Privacy Act, 20 U.S.C. §1232g](#).

Remote Monitoring: Type of ambulatory healthcare where patients use mobile medical devices to perform a routine test and send the test data to a healthcare professional in real-time. Remote monitoring includes devices such as glucose meters for patients with diabetes and heart or blood pressure monitors for patients receiving cardiac care. (ATA)

RHIO: The terms Regional Health Information Organization (RHIO) and Health Information Exchange (HIE) are often used interchangeably. RHIO is a group of organizations with a business stake in improving the quality, safety, and efficiency of healthcare delivery. RHIOs are the building blocks of the proposed National Health Information Network (NHIN) initiative at the Office of the National Coordinator for Health Information Technology (ONCHIT).

Spoke Site: Remote site where the patient is presented during telemedicine encounter or where the professional requesting consultation with a specialist is located. (ATA)

Standard: A statement established by consensus or authority that provides a benchmark for measuring quality and that is aimed at achieving optimal results. (ATA)

Store and Forward (S&F): Type of telehealth encounter or consult that uses still digital images of patient data for rendering a medical opinion or diagnosis. Common services include radiology, pathology, dermatology, ophthalmology, and wound care. Store and forward includes the asynchronous transmission of clinical data from one site to another. (ATA)

Synchronous: Interactive video connections that transmit information in both directions during the same time period. (ATA)

Teleconferencing: Interactive electronic communication between multiple users at two or more sites that facilitates voice, video, and/or data transmission systems: audio, graphics, computer and video systems. (ATA)

Teleconsultation: Consultation between a provider and specialist at distance using either store and forward telemedicine or real time videoconferencing. (ATA)

Telehealth and Telemedicine: Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve patients' health status. Closely associated with telemedicine is the term "telehealth," which is often used to encompass a broader definition of remote healthcare that does not always involve clinical services. Videoconferencing, transmission of still images, e-health including patient portals, remote monitoring of vital signs, continuing medical education and nursing call centers are all considered part of telemedicine and telehealth. Telemedicine is not a separate medical specialty. Products and services related to

telemedicine are often part of a larger investment by health care institutions in either information technology or the delivery of clinical care. Even in the reimbursement fee structure, there is usually no distinction made between services provided on site and those provided through telemedicine and often no separate coding required for billing of remote services. Telemedicine encompasses different types of programs and services provided for the patient. Each component involves different providers and consumers. (ATA)

TeleICU: TeleICU is a collaborative, interprofessional model focusing on the care of critically ill patients using telehealth technologies. (ATA)

Telementoring: The use of audio, video, and other telecommunications and electronic information processing technologies to provide individual guidance or direction. (ATA)

Telemetry: Remote acquisition, recording and transmission of patient data via a telecommunications system to a healthcare provider for analysis and decision making. (ATA)

Telemonitoring: The process of using audio, video, and other telecommunications and electronic information processing technologies to monitor the health status of a patient from a distance. (ATA)

Telepresence: (a) The use of a set of technologies that allows individuals to feel as if they were present, to give the appearance of being present, or to have an effect at a place other than their true location. Telepresence generally means the use of means HD quality audio/video. In some cases, the user's position, movements, actions, voice, etc. may be transmitted and duplicated in the remote location to enhance the effect. Information often travels in both directions between the user and the remote location (i.e., feedback of some sort is provided). Telepresence via video generally uses greater technical sophistication and higher audio/video fidelity than traditional videoconferencing. (b) The method of using robotic and other instruments that permit a clinician to perform a procedure at a remote location by manipulating devices and receiving feedback or sensory information that contributes to a sense of being present at the remote site and allows a satisfactory degree of technical achievement. For example, this term could be applied to a surgeon using lasers or dental hand pieces and receiving pressure similar to that created by touching a patient so that it seems as though s/he is actually present, permitting a satisfactory degree of dexterity. (ATA)

Teleradiology and Picture Archiving and Communications Systems (PACs): The electronic transmission of radiological images, such as x-rays, CTs, and MRIs, for interpretation and/or consultation. (ATA)

Videoconferencing: Real-time transmission of digital video images between multiple locations. (ATA)

Virtual Private Network (VPN): Method to carry private communications network traffic over the public Internet using tunneling or port forwarding which is the transmission of private data over public lines in an encapsulated form. (ATA)